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## *Translation.*

### MEMOIR ON THE RECONNAISSANCE OF RIVERS, FOR THE USE OF L'ECOLE D'APPLICATION DU CORPS ROYAL D'ETAT-MAJOR.


TRANSLATED FROM THE FRENCH,

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#### I. PRELIMINARY OBSERVATIONS.

On the courses of Rivers.—The description of a river should state the position of its source; that of its mouth, whether in the sea, or in a more considerable triver; he point where it ceases to be fordable, the places where it receives tributaries, and where the principal changes occur in its direction. The tributaries also should be described, when sufficient of themselves to serve as lines of defence, or as lines of communication. When rivers form the natural divisions of a country, these divisions are designated by the distinctive names of *the right bank* and *the left bank*, rather than *on this side* or *on that side*, which are relative terms depending upon the position occupied.

On the Beds of Rivers.—The bed of a river is that part of its basin upon which the waters flow. Many rivers are distinguished as having an ordinary bed and a larger bed; the larger bed is that which is covered by the waters during floods.

Torrents are those water-courses in which the variations of the declivity of the bed are very frequent and very considerable.

The larger beds of many great rivers embrace a very considerable surface. Dikes are sometimes constructed to contract them, the heights of which are two, three, four, and even seven metres,* and which under ordinary circumstances are not reached by the waters.

Alluvial deposits derived from freshets almost invariably make additions to that part of the bed of the river lying within the dikes; and to this cause may be attributed the fact that the waters of some rivers flow on a bed of greater height than the level of the adjacent country.

The bottom of the Po, for instance, is raised to such an extent, that the surface of its waters is at this time (183·) higher than the roofs of the houses of Ferrara. In some of the richest provinces of Holland, also, the waters are at a height of from twenty to thirty feet above the level of the adjacent country.

The normal section of a river is the section that is made by a vertical cylinder, having for its base a curve normal to the direction of the flow of the water. If a normal is drawn to one bank, it may be considered as normal to the other bank, and as perpendicular to the direction of the water which it meets. In this hypothesis, which is usually adopted, the imaginary curve becomes a right line, and the vertical cylinder a plane surface.

When the river flows in a straight line, the cross-section is of course normal to both banks. The bed in this case is usually widened, and the velocity of the current decreased.

When the river is winding, the cross-section is deeper on the side where the bank is concave to the stream, than on the opposite side. This is in consequence of the current abandoning in a great measure one bank at the elbows, and striking against the other, thus wearing it away and deepening that part of the river. Or, in other words, the cross-section being supposed constant, it is near the bends or turns that the greatest depths are found, and consequently the greatest difficulties in the crossing. Hence, fords are generally sought for in the straight portions of rivers. This important fact has been illustrated in Germany by L. Müller, and in Spain and Portugal by the English General Douglass. The German author contented himself with announcing it, and pointing out its application.[1] But the English author has made practical use of it, as it enabled him, when in the peninsula in 1812, to find the fords where the army in which he served crossed the Esla and the Duero.[2]

Fords.—Fords are transversal shoals in the bed of a river, across which men and horses can pass without swimming.[3]

Fords, to be practicable for cavalry, should in no part exceed 1.2 metres in depth. Those for infantry, one metre or even 0.8 metre if the current is rapid. The exact boundaries of a ford should be well defined, otherwise the troops in crossing may diverge from it, and get into deeper water. These dangers do not of course occur in the passage of a rapid river fordable throughout its whole bed. For ammunition wagons 0.65 metre is the limit of the depth for a ford, which should not be exceeded, lest the cartridges be damaged by the water.

There are fords which are permanent, and known to the inhabitants on the banks of a river. The greater number of them have names, and this is an evidence of their permanence. Fords and holes have been found in the Sarre and Moselle nearly in the same places after three years interval. A recent

* A metre is 39,371 inches English.

1 L. Mullers's Nachgelassene Militæriche Schriften, zweiter Band, enthaltend die Terrænlehre. Berlin, 1807, page 251.

2 Essay on the Principles and the Construction of military bridges. Pages 31 to 34 of the French translation, 1st edition.

3 We do not refer to artificial fords which may be found below the usual bars.

work clearly proves that the shoals of the Moselle are generally fixed as to position. The same remark has been made relative to the shoals of the Upper Garonne, which is subject nevertheless to freshets, and has a gravelly bottom.

In some rivers, the fords are liable to change from the effects of flood. In others, they are numerous and easily recognised. In the Meuse, for example, they succeed each other like a series of cascades, and forty-five may be counted within the distance of forty kilometres.[1]

The inhabitants frequently point out fords. It does not, however, always accord with their interests to make a correct statement, and it is possible they but imperfectly know them; the information they furnish is not always therefore to be relied on.

A lucky chance sometimes detects a ford. In the campaign of 1796, on the 30th of May, a ford, probably the only one in the Mincio at that time, about two hundred metres below the Borghetto bridge, was made known to the French advanced guard, (consisting of the brigade of General Gardanne,) by the cavalry of the enemy, which finding the bridge obstructed by the masses of the fugitives, crossed by it, and were followed by the French grenadiers. The ford was deep, and the bridge was soon repaired, the enemy not having had sufficient time to entirely demolish the part which was of wood.

The Studianka ford on the Béresina, by means of which the well known and unfortunate passage of this river was effected, was by mere chance pointed out by a peasant.[2]

The Position of Fords.—Most rivers may be forded near their head-waters, unless they flow through deep ravines or steep declivities, and unless their beds are obstructed by rocks. Hence the importance which is attached by military men to the occupation of elevated positions, including the head-waters or sources of rivers.

Let us imagine in each normal section of a river, the point of maximum depth. The line which unites all these points differs but slightly from that which bodies floating on the surface would follow. If these lines coincided, we would possess an easy method of determining whether a river was fordable. It would suffice to set adrift a small boat to which a sounding lead is attached, and sunk one metre in the water, as the motion of the weight on touching the bottom would indicate the fordable points. This process, which is recommended in many works, may be employed, but should not however be entirely relied on. The point at which the small boat crosses the succeeding normal section in pursuing this floating line, does not always pass through the deepest point of this section.[1]

Two cross-sections of a river that are close to each other deliver very nearly equal quantities of water; consequently the rapidity or the width increase in the inverse ratio of the mean depth, and reciprocally. Thus an acceleration of the velocity of the water, or the enlargement of its bed, is an indication which may guide us in searching for fords.

In the upper part of some rivers the shoals are formed of narrow banks of gravel, with inclined planes of a greater or less declivity, which divide them by dams, as it were, into intervening spaces called pools.

In the pools of rivers, as in the reservoirs of canals, there is little or no current; on the shoals which lie between them, there is always more or less current. In the pools the water appears to be at rest; upon the shoals it is rippled, as will be very apparent by the reflection of the light from its surface. The line of demarcation between the sheets of still water and the ripples of the shoals is easily defined when the waters are low, the only time when a river is likely to be fordable. This line is the fordable line, that is to say, the one giving the least depth and the least velocity, it is the edge of the bank of gravel, the sill of the natural dam, over which the water flows and begins to acquire an increased velocity.[2] This line is usually oblique to the banks, but the sinuosities of the banks do not afford any certain method of determining it. Among the shoals of a river, those situated where the river is of great breadth should be selected for fording, for these unite two very essential conditions; to wit, but little depth and a gentle current. Upon a rapid, strictly speaking, as on the top of a causeway or edge of a bank, the passage is not impracticable, but it is dangerous.

There are shoals in the Moselle in France, some of them fordable, which in summer obstruct the navigation for a distance of 2,000 metres. The mean width of these shoals is not less than 220 metres, and their length is much greater than the width of the river, owing to their oblique direction. Although they have no fixed positions in reference to the bends, it is nevertheless observed that the greater number are found in those parts of the river which are the straightest and broadest.

Between the frontier of France and Trèves, there is a shoal of the length of 4,600 metres; and between Trèves and Coblentz, a distance of 192 kilometres, the shoals intervene at the mean distance of about five kilometres. They are generally at the mouths of the ravines which empty themselves into the Moselle, and are formed by angular stones, often quite large. The shoals here are not so broad as those of the Upper Moselle, and there is usually

1 A kilometre is 1,000 metres, or 3,280.916 English feet.

2 Col. Napier, in his history of the Peninsular War, gives the following account of the discovery of a ford by the French. At the combat on the Carion, the bridge was blown up by the allies. "This checked the advance of the French for an instant; but suddenly a horseman darting out at full speed from the column, rode down under a flight of bullets to the bridge, calling out that he was a deserter; he reached the edge of the chasm made by the explosion, and then violently checking his foaming horse, held up his hands, exclaiming that he was a lost man, and with hurrid accents asked if there was no ford near. The good natured soldiers pointed to one a little way off, and the gallant fellow having looked earnestly for a few moments as if to fix the exact point, wheeled his horse round, kissed his hand in derision, and bending over his saddle-bow, dashed back to his own comrades, amidst showers of shot and shouts of laughter from both sides. The next moment Maucune's column, covered by a concentrated fire of guns, passed the river at the ford thus discovered, made some prisoners in the village, and lined the dry bed of the canal."—*Trans.*

1 If, for instance, there should be trenches in the bed of the river.

2 We extract these views from the memoir of M. Borel, and from a letter that he addressed to us in reply to certain inquiries that we had made of him.

immediately at the foot of them a very decided increase of velocity, called by the boatmen a *rapid*, as the rapid of Sierek, which is succeeded by large waves, and at the same time, or almost immediately after, a great depth, from one to sixty metres or more, where the waves are still felt at the distance of one hundred metres.[1]

The enlargement of the beds of rivers, and the slackening of their currents near their outlets in the sea, cause a considerable alluvial deposit to be made at these points. Hence, these deposits often form fords, particularly where the streams, as in mountainous regions, are torrents charged with sediment.

Thus, it is certain that fords of this character may be found at the mouths of all the small streams which flow through the defiles of the mountains of Calabria, of Galicia, the Asturias, &c. In Calabria, the bars are even above the ordinary level of the water which filters through them. At the period of floods, these rivers clean out and change their beds, or inundate the adjacent country. In the fords that we have just spoken of, the bottom has but little consistency; the rising tide, and the waters of the sea driven back by the winds, often rendering them impassable. Military history, however, affords us many examples of rivers having been crossed by fording them near their mouths. The Somme was crossed in 1346, near its mouth, at the ford of Blanchetache,[2] which has acquired in the annals of France a disastrous celebrity. This ford is very long, and is passable for two hours only during low tide. It was defended by Godemar Dufay, who betrayed his country. Fifteen men could only pass over it abreast. Henry V. attempted to pass this ford in 1415, to quit France, but he found it destroyed, and was obliged to cross the Somme at Saint Quentin, where a ford that was partially defended, served his purpose. In 1421, the Dauphinois had commenced crossing it to unite themselves to the sire d'Harcourt, when they were attacked by Philippe le Bon, who defeated them near Mons en Vimen, on the left bank of the Somme.[3]

Rivers which are not fordable in consequence of works which raise their level, are often made so, either by breaking away the dikes, or opening the sluices above the dikes, or in the dikes themselves; causing the waters in either case to pass of in greater quantities, and thus reducing their depths above. It was thus that on the 17th of May, 1809, the 7th French corps d'armée, in its expedition from Lugo to Oviedo, crossed the Narcea at Comellana, by opening a dike which gave so great a vent to the water, that in the space of three hours it had fallen a foot.[4] A river in which no artificial obstacle, such as dams, &c., has obstructed its natural course, may be rendered fordable by digging a canal for drainage. This method appears to have been frequently adopted in ancient times, viz: by Crœsus on the Halys, and by Cæsar on the Segre. It is particularly applicable to rivers having a rapid fall. The passage in the Commentaries where Cæsar describes his operation, has been misunderstood by some military writers. Enlightened by a knowledge of the site, the author of *l'Essai sur l'histoire générale de l'art militaire*, has shown that the description was literally correct.[1] But it often happens that in withdrawing a considerable quantity of water from the main channel of a river which has little fall, the water is not sensibly diminished either in depth or breadth. It then becomes necessary to make a dam above the point at which the river is tapped, to ensure the success of the plan.

Fords which are found where rivers disappear, either partially or entirely, belong to the same class as the foregoing. The disappearance of the Rhone, for example, some distance below fort l'Ecluse is not entirely complete; besides, the bed of the river being obstructed at this place by large rocks, it can only be crossed by means of a bridge.

On the Breadth and Direction of Fords.—Fords are of various breadths. Generally speaking, those of rivers are broader than those of torrents. In a river that is fordable presenting two elbows near to each other, if it be desirable to cross from the right to the left bank, one should leave at a point situated on a part of the first mentioned bank which presents its convex side to the river, and a direction making an acute angle with the current should be taken towards a point on the convex part of the opposite bank. It is easily seen that in following this direction the concavities are avoided, where the greatest depths are found.

Rivers are sometimes so very irregular in depth, that to cross them by fording it is necessary to advance by zigzags. Two of the fords of the Segre, about a league below Lerida, present this peculiarity.[2] The fords of the Var, particularly those near Saint Laurent, are extremely difficult to follow, as they are very winding and quite narrow; hence guides are taken to cross them. The bottom at these fords is very sandy.

Character of the Bottom, and the Approaches to Fords.—The fords of rivers in mountainous countries are usually firm, but are almost always obstructed by pieces of rock, which prevent their being used by horses, or at least by wheeled vehicles, and which also render them difficult of approach.

In highlands, the pebbles and gravel over which the waters run form a solid bottom. Sometimes, and particularly in limestone districts, the passage is rendered dangerous by holes. In low countries the rivers have little fall, are very winding, and usually flow on a bed composed of a mixture of mud or clay and sand. Holes are seldom found in the beds of these rivers; the soil, however, being loose, the fords are soon destroyed by the passage of cavalry, as are also the approaches to them, which are frequently marshy.

Precautions to be taken in Crossing Fords.—The direction and the breadth of fords should be de-

1 Memoir of Messrs. Le Masson and Lejoindre, page 83. We are indebted to these engineers for the most interesting and complete work that we possess on river navigation.

2 Or Blanque-Taque, map of Cassini. It is not marked on the new map of France. The construction of the canal adjacent to the Somme has changed the features of this locality.

3 History of the Dukes of Burgundy, vol. v, page 75, 1st edition.

4 Moniteur of 1809, page 692.

2 Carrion Nisas, vol. ii, page 237.

fined by two rows of stakes, on which are marks denoting the depth of the water.

In cases where stakes cannot be driven into the bed of the river, marked stakes are fixed in the ground on both banks, and cords stretched from one to the other, in order to show the direction of the fords; these cords serve also to secure the safety of those who may be carried away by the current. Sometimes horsemen are placed below the ford fo this purpose.

When a very rapid river, fordable throughout, is to be crossed, a line of cavalry may be placed above the ford, to check the velocity of the current, and thus lessen the shock to which the infantry would otherwise be exposed. The men when crossing should look steadily at the opposite bank; for if they look at the water for some time, their sight becomes confused, and they deviate from the course without being aware of it.[1]

At the passage of the Dora Baltea, in Piedmont, in 1552, Marshal Brissac disposed of the infantry in ranks of eight or ten men abreast, each rank grasping a pike. He also placed the cavalry and baggage above the ford.

At the passage of the Brenta, on the 5th of May, 1809, and at that of the Piave, on the 8th, the soldiers marched by sections, interlocking their arms, and having their cartridge-boxes on their knapsacks or on their heads. The water reached their waists, which is very deep, considering the rapidity of these streams; one hundred and fifty swimmers recovered and brought back to the bank those who had been carried away by the current.

On the Floods of Rivers, and on the Variations which the Tide occasions in them.—Rivers having their source in mountainous regions are subject to periodical floods, caused by the melting of the snows, which occurs every summer. They are most shallow in spring and autumn. Many rivers become swollen after the autumnal rains, a short time before winter. The torrents and rivulets which flow through mountainous countries have irregular floods also, which cannot be foreseen, as they are produced by rain.[2] Accounts of these, by travelling rapidly on horseback, may be carried to the lower parts of the valley, before the waters reach them. A very broad bed, or high and long bridges, are evidences of a river's being subject to floods.

The rising tide causes a sort of periodical flood near the mouths of rivers, which occurs twice in twenty-four hours, and which is frequently perceptible at a very great distance from the sea. This phenomenon is most remarkable at the periods of new and full moon about the time of the equinox. The exact time of the tides varies with the locality. The wave of the flood tide, where the tide rises considerably, is known as the *bore*. At spring tides it presents the appearance of a wall of water extending across the whole bed of the river, rushing forward with considerable noise, and endangering the safety of buildings which may be exposed to it.

The winds also produce a very perceptible variation in the level of rivers and lakes which communicate with the sea, and even in the level of the sea itself. There are many remarkable instances of this effect of the winds, which are important as connected with military operations.

M. Carrion Nisas thus explains the surprise of Carthegena by Scipio, which must have been favored by the fall of the waters of a pond communicating with the sea, and which at the usual depth prevented the approach to the walls on the north. It would seem to have been sufficient for a land wind, as it blows in the spring, to drive the waters of the pond towards the sea to such an extent as to leave a fordable passage.

Similar effects are witnessed in Lower Languedoc, where there are many ponds communicating with the sea by openings, which become obstructed by sand; the inhabitants annually taking advantage of the low stage of the water to cut them out again, to allow the fish to enter the ponds. The land-winds not only frequently drive the waters of these ponds some distance from their ordinary banks, but also so reduce the depth of the little water necessary to float the boats which navigate them, that they are at these periods obliged to lay by. This inconvenience has rendered it necessary to dig a canal by the side of these ponds. The winds from the seaward produce the contrary effect, and often drive the waters forward as far as two hundred or three hundred metres according to the declivity of the beach. The waters of the sea, driven violently by these same winds, sometimes overflow that part of the neck of land which usually serves as the road from the Adige to Sète (or Cette.)

On the 26th of December, 1798, General Bonaparte crossed the Red Sea, which is fordable at low tide two kilometres north of Suez. The distance across is 1,800 metres: the general was obliged on his return to make a long circuit.[1]

At the siege of Stralsund, in 1715, the Prussians having discovered that the sea, on the shore of which the entrenched camp of the Swedes was established, was reduced to a very slight depth on the prevalence of the south wind, resolved on a knowledge of this fact[2] to make arrangements for a night attack, which, on the recurrence of that wind on the 24th of October, was perfectly successful.

On the 31st of May, in the campaign of 1737, the celebrated Munich attacked the lines of Perecop in front, (he never attacked in flank,) and forced them. He was not aware that the arms of the sea of Azof, which in advancing from the west upon the land forms the peninsula of the Crimea, and on which the right of the lines rested, became dry in summer,

1 Santa Cruz, vol. ii, page 222.

2 On the 31st of August, 1813, all the fords of the Bidassoa were rendered impassable by a rain of three hours duration. Three divisions had just crossed to raise the siege of St. Sebastian. The river became a torrent; the attack on the left not having succeeded, these three divisions were immediately recalled, but they were obliged to fight their way in order to repass the river at the Bera bridge, where the enemy was entrenched.

1 The discovery of this shoal has given rise to various discussions foreign to this memoir, on the passage of the Red Sea by the Jews, 1473 years before the Christian era, the year of the accession of the great Sesostris to the throne. Salvator, *Institutions of Moses.*

2 Historians do not agree as to the manner in which this fact was communicated to the Prussians. Nordberg, History of Charles XII, vol. iii, page 219. Frederick II, Memoirs of Brandebourg vol. i, page 257. Carrion Nisas, vol. ii, page 137.

and that the westerly winds drove back the waters so effectually at this season, that one might enter into the Crimea almost dryshod. A partial advantage was taken of this circumstance in the campaign of 1737. But the Russians were more fortunate in the campaign of 1738, for the wind commenced to blow on the 7th of July, while field-marshal Lascy with his army of 30,000 men was on the shore of the sea of Azof; he arranged them in order of battle, and had time to cross the arm of the sea without accident, before the return of the waters, while the enemy were waiting for him behind the lines.[1]

Islands and Sand Banks.—The islands in a river are sometimes covered with a layer of vegetable earth, in which case they are wooded or cultivated; sometimes they are swampy, and overflowed in time of floods.

On sand banks there is a total absence of vegetation. They are frequently covered and even carried away by the current in time of floods. Islands, and sand banks also, are of importance in the attack and defence of rivers.

On the Slopes of the Valleys of Rivers.—The command of one bank over the other, is a consideration of the first importance in making the reconnaissance of a river.

When the crests of the slopes are of the same height, they have generally the same inclination, and consequently neither bank is commanded by the others; but when these crests are of different heights, the higher has usually a more gradual slope than the other, and is therefore farther removed from the river's bank; it may be so far distant, that the advantage of its greater height is lost, and, as a consequence, that the command belongs to the crest of the opposite bank. This observation is due to Müller, an author already cited.

Of Tributaries.—Tributaries are of importance in the passage of rivers, when they are sufficiently large to serve either for defence or navigation. Some observations illustrating this, will be made in the following paragraphs.

Bridges, Ferry-Boats, Rafts, and Boats of the Country.—To cross a river that is not fordable, recourse must be had to fixed bridges, trestle-bridges, bridges of boats, rafts, ferry-boats, or boats of the country. All the details relative to these different methods of crossing a river, are given in a special memoir.[2]

## II. ON CROSSING RIVERS THAT ARE NOT FORDABLE, IN OFFENSIVE OPERATIONS.

Rivers may be crossed under many different circumstances. We shall point out here, those only which present themselves most frequently.

When it is necessary to cross a river that is not fordable, in the presence of an enemy, a knowledge of the point where the passage is intended to be made, should, if possible, be concealed. In the selection of this point the principal object of the campaign should be taken into consideration; the advantages of the position which will be occupied on the opposite bank after the passage; the degree of facility with which the bridges can be constructed, either in reference to the proper positions or the proximity of the necessary materials; and the protection that the troops will receive from the bank previously occupied.

Marshal Saxe recommends passing between two tributaries on the enemy's side, as these tributaries may be used after the passage is made, to cover either the front or flanks of the corps which have effected it.[1] But if one of these tributaries must be subsequently crossed, it would be equivalent to making a second passage of the river.[2] In this hypothesis, it may be more advantageous to throw the bridges over the river at such a distance from the point where it receives this tributary, that it will be unnecessary to cross it.

Navigable tributaries are of great assistance in crossing rivers. Having collected in one of them all the boats that are necessary, they are brought near its mouth, where the final preparations are completed. The passage of the Rhine was effected in this manner in 1797, the preparations having been made in the Ill. If a bridge of rafts is to be constructed, it is only necessary that the tributary should be of sufficient depth to float it.

Sometimes the passage can only be made in the presence of the enemy. In order that the troops which have crossed may receive effectual protection from the bank already occupied, this should command the opposite one, and the breadth of the river should not exceed the range of artillery. Finally, the point at which the passage is made should occupy the vertex of a concave arc turned towards the enemy, so that the fire of the artillery may cross upon his approaches.

The point which Gustavus Adolphus selected in 1632, to cross the Lech in the presence of Tilly's army, entrenched on the other bank, united all these conditions. This passage was made by means of a trestle-bridge, on the 5th of April, near Rain, not far from the point where the Lech enters the Danube. It is one of the most interesting examples in military history.[3] The French armies had crossed the Lech several times, particularly in August, 1796, by fording it in three places in the environs of Augsburg. This is a rapid river, with steep banks, and in the month of March, being swollen by rains, rises to a considerable height.

The same considerations determined the point of crossing the Limat by the French army in 1799.[4]

1 Manstein, Memoirs on Russia, vol. i, pages 178 and 356.

2 This treatise has not appeared. But it is less wanted now than it was ten years ago; and Haillot's (captain of pontoniers) work (*Essai d'une instruction sur le passage des rivieres,*) in 8vo. Paris, 1335, may take its place.

1 The crossing of the Po by the French army in 1746, after the battle of Plaisance, was an example of the case pointed out in the text. It took place between two opposing armies; but after the French army had taken its position on the right bank, its left flank and part of its front, was protected by the Tidon.

2 The conqueror of the Austrians found himself in this position after having crossed the Adige at Ronco, on the 14th of November, 1796, and which led to the battle of Arcola, fought to pass the Alpon. *Jomini*, vol. ix, page 177.

3 History of Gustavus Adolphus, from the notes of M. Archenholz, by M. D. M., in 4to, page 482.

4 The position of Dietikon was selected for this purpose, with judgment. There was a considerable bend in the river at that place; the French being on the convex side, had the advantage

There is another circumstance to be considered, that we have not remarked, viz: the advantages afforded on the opposite bank for fighting after the crossing has been effected.

At the passage of the Mincio, at Monzambano, on the 25th December, 1800, the field of battle was favorable for light troops; but it would have been difficult to deploy the line, if the Austrians had not been dislodged from the heights of Monte Bianco.

When the breadth of the river is so great, that one bank is beyond the range of the artillery stationed on the other, the occupation of the islands, in all cases advantageous, is of the greatest importance. The batteries that protect the passage are placed on these islands. The Island of Lobau became celebrated in 1809, by the influence its occupation exercised during the construction of bridges over the Danube.

When the bridges have been built, and the passage made, the communication between the banks should be secured. For this purpose works are erected, called from their use, *têtes de pont*, and serving either to protect the retreat of the forces which have crossed the river,[1] or to cover the passage of the troops destined to re-inforce them. The size given to them, the care taken in their construction, the force of the detachment entrusted with their defence, vary with the importance of the bridges. Among the many *têtes de pont* constructed in the late wars, we may cite that of the Neuwied on the Rhine, below Coblentz.[2] This work is connected with several passages of the Rhine, made by the army of the Rhine and the Moselle, previous to the 18th February, 1799, when Fort Ehrenbreitstein (formerly Hermanstein, so called from a neighboring village) fell into the power of the French, after a blockade of sixteen months. Floated down by the Moselle, the boats during the night passed under the cannon of the fort unperceived, in consequence of the precautions taken by the pontoniers.

When the river is broad and not fordable, it is sufficient to build *têtes de pont* on the enemy's bank. If it can be easily crossed, or if both banks are within the limits of the theatre of war, every bridge requires a *tête de pont* on both banks. Sometimes, instead of covering the entrance to a bridge by a work, it is sufficient to defend the approaches by a high redoubt either on the right or the left.

As field works cannot have much relief, a *tête de pont* should not be placed on a site which is commanded.

If the river is straight, and there is a *tête de pont* on the enemy's bank only, all the interior of the work would be covered from the fire of this bank, but would be entirely exposed from the opposite bank. As the work may be taken in reverse, in case the river projects, parados are necessary to cover the troops.

Finally, in the case where the river forms a re entering angle, a certain space on the side occupied would not be exposed to the fire of the enemy's artillery; the re-entering points have also other advantages, as they afford favorable sites for batteries destined to flank the works on the opposite side. These fires will keep the enemy at a distance while the troops debouche from the *tête de pont*, or whilst they retire within it.

For the plans and profiles of *têtes de pont*, the *Considerations sur la Guerre* of General Rogniat, chapter 9th, may be consulted, and also the works of Saint Paul and of Bousmard, &c.

### III. OF THE DEFENSIVE.

It is difficult to prevent an enterprising enemy of superior force from crossing a river; but the fact of his passage may be ascertained in time to fight him before his troops are collected together.

The commander of the army on the defensive should cause the river to be carefully reconnoitered; he should station at different points on its course, detachments to watch the movements of the enemy. Besides, the main body of the army should be concentrated in one or two positions not far from the points where it is most likely that the enemy will endeavor to pass. These are called the central positions. When these positions are at the centre of a great concavity, we have only to march the length of its radius to reach the points which are threatened. This advantage is common to all circular lines of defence presenting their convexity to the enemy.

If there are bridges or fords on the river, a close watch should be kept upon them, without neglecting the points where the passage appears the most difficult. Exact information should also be obtained in reference to all the means of crossing within reach, such as by ferry-boats, batteaux, &c., of which the enemy might avail himself.

In the campaign of Italy, of 1799, the Austrian General de Chasteller directed the operations in crossing the Adda, which was effected on the 26th of April, opposite the Chateau of Trezzo, upon a bottom considered almost impassable, and where the waves roar and form a well defined rapid. His men carried thither by hand a small boat, and the necessary pontoons. Twenty chasseurs crossed first, and five hundred men succeeded them; as the anchors would not hold on to the bottom, which is of rock, the Austrians made use of ropes fastened to the trees and to the projecting points of the rocks. The bridge was begun at eleven at night, and finished by four the next morning. A violent storm prevented, it is said, the garrison of the castle of Trezzo from hearing the noise of the work of the pontoniers, and the troops composing it were made prisoners on the 27th, when it became necessary to evacuate the whole line of the Adda, as being far too extensive for an army of 22,000 men to defend against 52,600, which Suwarrow had at command in the attack.

Of Bridges.—When the disposable force is small, and it is absolutely necessary to act on the defensive, all the bridges that are not fortified should be destroyed. Sometimes we are prevented by powerful mo-

of being protected by the cross-fires of their numerous artillery; for this purpose an elevated plateau in front of Nieder Urdorf, afforded an excellent position. Dedon Aine, account of the passage of the Limat, on the 24th of September, 1799, page 56.

1 There is a valuable treatise on *tetes de pont* in M. Clairac's work, *Ingenieur de Campagne*, page 175.

2 M. Mares, an officer of engineers, who revised the historical and military memoirs, has had a map of the battle of Neuwied (April 18, 1797,) engraved; it is not very scarce, and upon it is a plan of the works of the *tete de pont*.

tives, apart from military considerations, from taking this precaution in due season; in that event the necessary arrangements should be so ordered, that on the approach of the enemy, the communication from one bank to the other may be destroyed in a few moments.

If the bridges are of stone, these preparations consist in establishing mines to blow them up. If they are of wood, to cutting them away, reserving only the width necessary for the passage of the detachment left on the other side to give notice of the approach of the enemy. It requires considerable time to burn a wooden bridge, or to cut it away, when under the fire of the enemy. Cases of the surprise of bridges before they were entirely demolished, are very common in campaigns. In addition to these preparatory measures, it is necessary to protect the bridge by tambors and barricades, and to detail a guard for its defence; for a bridge being a defile it must be guarded; there is no exception to this rule. Formerly, towers were erected for the defence of bridges, (as for example, those now seen in Italy and Spain,) and they accomplish this object completely when they are near the bridges.

When it is desirable to preserve the use of a bridge for an indefinite period, a *tete de pont* is constructed there; or, if it is only intended to prevent the bridge from being used or taken by the enemy, the cross-fires of numerous batteries and all other possible obstacles are opposed to him; but the most certain method under such circumstances is to destroy the bridge. It is very difficult to prevent a resolute enemy of superior numbers from forcing a bridge. For instance, in the campaign of 1809, the passage of the bridge of Ebersberg over the Traun, by the French troops, on the 3d of May, may be cited; this passage was far more obstinately disputed than that of the bridge of Lodi, in 1796, and attended with much greater loss.[1]

Of Fords.—Fords are destroyed by abattis, harrows, crowsfeet, and planks filled with projecting spikes, and sometimes by stout, sharp pointed stakes driven into the bottom; this latter method is recommended by many authors. Large and deep ditches are often dug on the banks of the river, directly in front of the fords. These obstacles, however, do not impede the enemy long, when there are no troops at hand to defend them.

Ferry-Boats, Flying-Bridges, and Batteaux.—The positions of ferry-boats and flying-bridges are usually indicated either by the road-ways leading to the river, or by the view of the bridges, small houses or huts, at those points. These means of crossing, as well as all boats that are found on the river, ought to be collected near the shore of which we have possession, and sunk, if it is feared that the enemy may seize them.

Places favorable for the passage of the enemy.—Posts are established upon the islands opposite re-entering angles, in front of the tributaries, and on all the points from which the enemy's shore can be best examined. These posts are defended by small works; roads are opened from one post to another, and from each post to the central position: batteries are constructed on the prolongations of the tributaries, where it is supposed that the enemy may make his preparations for crossing, and epaulments are raised for the purpose of covering the defenders. If there are dikes, they are made use of for this last purpose. Finally, cuts or entrenchments are made in the re-entering angles from one elbow to the other.

The enemy will be prevented by these measures from attempting to effect the passage, unless by main force; and will be obliged to make his advance across in boats, or on flying-bridges,[1] if the breadth of the river exceeds the range of artillery. If it is less, he might construct a bridge under the protection of his cannon; but in either case his passage would be known.

If the river describes an arc of great extent, presenting its concavity to the defenders, the greater portion of the troops should be placed near the centre of this arc; if the river is straight, the central position will be less easily determined.

When the separation of the troops into numerous detachments cannot be avoided, their concentration is facilitated by opening the necessary communications. In some cases, the central position is fortified, and the approach of the enemy is there awaited.

1 Treatise on the War of 1809, by Lieutenant General Pelet, vol. ii, page 203.

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U. S. Ship Independence.—The United States ship Independence, Commodore Charles Stewart, (the flag-ship of the home squadron,) arrived at New York on Sunday from a three months' cruise. She was struck by a heavy squall on the morning of the 8th of September, and was damaged in sails and spars. At the time she was struck she had on her one reefed foresail, three reefed fore and main-topsail, foretopmast staysail, and main-trysail. The first gust split the foretopmast staysail and carried away the main-trysailmast ten feet from the deck; the foretopsail split in clewing up. In ten minutes more the starboard main-yardarm was carried away twenty feet from the end, and the maintopsail and the foresail split. The ship lay quiet with her lee main-deck guns partly submerged, and would not pay off till her weather fore-rigging was manned, when she soon got before it. The yard was four and a half in circumference where it broke, and on the fifth day after the accident it was handsomely fished with an anchor stock and swayed aloft.

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"The Cornwallis."—The Bay state Democrat of Friday says: "The sham fight at Needham, (to celebrate the anniversary of the surrender of Cornwallis,) went off yesterday in fine style, in the presence of Col. Johnson, and a large concourse of spectators. About 500 troops were present from Needham and the neighboring towns. These were divided into two parties, British and American. The former were commanded by Gen. Rice, of Needham, and the latter by Col. Dewing. The guest of the day, Col. Johnson, was received by E. K. Whitaker, Esq., Chairman of the committee of arrangements, in a felicitous speech, to which the former returned an appropriate reply.

1 The boats being in readiness, the construction of a flying-bridge on the Rhine, was completed in four hours during the wars of the French revolution, and 1,500 men could cross it in an hour.

## Communications.

### NOTES ON FOREIGN MILITARY SCHOOLS AND ARMY ORGANIZATIONS, IN THE YEAR 1840.—*Continued from page* 529.

COLLECTED BY AN OFFICER OF THE U. S. ARMY.

#### II. PRUSSIA.*

Prussia is divided into eight provinces, and each of these provinces into several smaller divisions. The whole population in round numbers is 14,154,500.

1. *Province of Prussia.*—This province contains one hundred and twenty-three cities, six towns, and upwards of 14,000 villages, hamlets, &c.; its population is 1,738 inhabitants per square mile. Its principal military places are Kœniegsburg, Pillau, Graudentz, Dantzic, and Thorn. The first is the head quarters of the first corps d'armée; its old fortifications have been demolished. Pillau is a small place, but regularly fortified. Graudentz is surrounded by some good military works commenced under Frederick the Great. Dantzic is strongly fortified, contains good barracks, an arsenal of artillery construction, and a manufactory of arms; it is the head-quarters of the commander-in-chief of the first corps d'armée. Thorn is a strong place on the right bank of the Vistula.

2. *The Province of Posen* contains one hundred and forty-six cities, four towns, and upwards of 6,000 villages, hamlets, &c.; its population per square mile is 2,050. Posen, the chief town of the province, is the head-quarters of the fifth corps d'armée, and the depot of artillery; large sums are annually expended on its fortifications, which are not yet complete.

3. *The Province of Brandebourg* contains one hundred and thirty-eight cities, eighteen towns, and upwards of 3,000 villages, &c.; its population per square mile is 2,220. Berlin, the capital, is the head-quarters of the royal guard and the fourth corps d'armée. It contains a large arsenal, good barracks, general military schools, &c. Potsdam has a manufactory of fire arms, good barracks, and general military schools. Spandau is well fortified, and has in its vicinity a fine armory, and a foundery is soon to be constructed. Francfort-on-the-Oder, a fortified place, is the head-quarters of the third corps d'armée.

4. *The Province of Pomerania* has seventy-two cities, ten towns, and near 4,000 villages, &c.; its population per square mile is 1,630. Stettin, a fortified place, is the head-quarters of the second corps d'armée. The other strong places are Damm, Colberg, and Stralsund.

5. *The Province of Silesia* has one hundred and forty-seven cities, thirty-seven towns, and 6,500 villages, &c.; its population is 3,400 per square mile. Breslau is the head-quarters of the sixth corps d'armée, and has a cannon foundery. Schweidnitz, Glatz, Neisse, Silberberg, Glogau, and Cosel, are more or less strongly fortified; Neisse has good barracks, a manufactory of arms, and one of powder, and an arsenal of construction of artillery.

6. *The Province of Saxony* has one hundred and forty-two cities, twenty-eight towns, and 3,000 villages hamlets, &c.; its population is 3,260 per square mile. Magdebourg is the head-quarters of the fourth corps d'armée, and has good barracks, and a great arsenal. The other fortified places are Torgau, Wittemberg, and Erfurt. Suhl has a manufactory of arms.

7. *The Province of Westphalia* has one hundred and thirty cities, eleven towns, and over 5,000 villages, and hamlets; its population is 3,530 per square mile. Munster is the head-quarters of the seventh corps d'armée. Minden is well fortified.

8. *The Province of the Rhine* has one hundred and twenty-one cities, sixty-nine towns, and near 7,000 villages and hamlets; its population is 4,800 per square mile. Coblentz is the head-quarters of the eighth corps d'armée. Its other strong places are Wesel, Cologne, Juliers, and Saar-Louis. Saarn and Solingen are celebrated for their armories. Dentz has an arsenal of construction for artillery.

*Military Polity.*—The King is commander-in-chief of the army. All orders pass through the Minister of War, who is always a general-officer, resident at Berlin. This department is divided into four general bureaus. The officers are divided into eleven grades: field-marshal, general, lieutenant-general, major-general, colonel, lieutenant-colonel, major, captain, first lieutenant, second lieutenant, and ensign. There are one field-marshal, (the Duke of Wellington,) eight generals of infantry and cavalry, thirty-five lieutenant-generals, and seventy-nine major-generals.

*Staff Corps.*—The staff is under the direction of a general officer, and is divided into a general staff, and staff of corps d'armée. The first is established at Berlin, and in time of peace is charged with the study of campaigns, probable theatres of war, collecting statistical information of other armies, &c., &c. It has fifty-three officers. The staff of each corps d'armée is composed of one superior officer and two assistants, generally of the grade of Major and captain. All the members of the staff must be men of known capacity and have passed through the general War School. In addition to the above, there is an organized staff for each of the principal fortifications.

*Corps of Engineers.*—This corps in 1839 consisted of two hundred and fifty-two officers, who have for a chief a general officer of engineers. There are two lieutenant-generals, one major-general, four colonels, three lieutenant-colonels, sixteen majors, seventy-four captains, and one hundred and fifty-three first and second lieutenants. The corps are divided into one general and three subordinate inspections, and nine detachments of provinces. The inspector general is stationed at the bureau at Berlin. The several fortifications and detachments of pionniers are divided among the subordinate inspectors, who ordinarily are general officers of the corps. Engineer officers are employed indiscriminately in the fortresses or with the divisions of pionniers.

The engineer troops consist of one division of pionniers of the guard, and eight of the line. Each division, commanded by a superior officer or captain,

* A considerable portion of this and the two following sections is compiled from Hatilot.

is composed of two companies on the peace establishment, and three in time of war. Each company is divided into three sections, one of sappers, one of miners, and the third of pontoniers. In the peace establishment the strength of a company is eighty-four men; in war, about two hundred and fifty.

The ponton-equipage for one company of pontoniers, consists of forty carriages, two hundred and forty six horses, and a detachment of one hundred and twenty-eight men. This equipage includes all the pontons and implements necessary for the passage of a river from 600 to 700 feet in width.

Many changes and improvements have recently been made in the use of this equipage, and the ponton division of the Prussian engineer corps bids fair to rival the most skilful of other countries. Experiments in the use of the *swimming shoes*, were made at Magdebourg, by which it was shown that the whole detachment of this corps could, by means of these shoes, march, charge and fire as well on the water as on land. The use of these swimming shoes by a part of the engineer troops will greatly facilitate the construction of military bridges for an army in the operations of a campaign.

*Artillery.*—Prince Augustus of Prussia is the chief and inspector-general of this corps. Its officers consist of one inspector-general, two major-generals, eight colonels, four lieutenant-colonels, forty-four majors, one hundred and eighty-nine captains, and six hundred and sixty-four first and second lieutenants.

The bureau of the inspector-general is at Berlin. The artillery establishments and the *personnel* of the corps are divided into three divisions, which are commonly inspected by major-generals.

The artillery troops are composed of one brigade of the guard and eight of the line, and one division of artificers of two companies. Each brigade has a staff, a company of artificers, and three detachments, each composed of one company of horse and four companies of foot. The brigade staff consists of twelve members. Each company on the peace establishment is composed of ninety-six men; and, if mounted, one hundred and one horses.

*Infantry.*—The infantry is divided into infantry of the guard and of the line. The guard is composed of two regiments of foot guards, two of grenadiers, one of reserve, one battalion of reserve, two of light infantry, and a company of sub-officers of the guard. The infantry of the line is composed of thirty-two regiments of the line, eight of reserve, eight battalions of reserve, and eight divisions of light infantry.

Each regimental staff consists of four officers, one surgeon, three master armorers and artificers, and twenty-four musicians. A battalion staff consists of three officers, a surgeon, and a drum-major. The strength of a company is one hundred and fifty-four men. In time of peace a battalion of the line numbers five hundred and twenty men, of the guard six hundred. In war each are increased to one thousand men. The organization of the light infantry is the same as that of the line. Each division is composed of two companies. The battalions of reserve are made up of old soldiers unfit for duty in the field. The company of sub-officers is composed of veterans who are charged with guarding the palaces.

*Cavalry.*—The cavalry of the guard is composed of one regiment of body guards, one of curaissers, one of dragoons, one of hussars, and two of hulans. The cavalry of the line consists of eight regiments of curaissers, four of dragoons, twelve of hussars, and eight of hulans. Each regiment is divided into four squadrons. A regimental staff is made up of ten members, including surgeon, armorers, &c. In the peace establishment each squadron has one hundred and forty five men; in war, one hundred and fifty.

*Chasseurs-a-Cheval.*—The chief of this corps is a general officer; its immediate commandant a superior officer; it numbers one hundred men.

*Gendarmery.*—The whole number of this corps is about seventeen hundred and fifty. It is charged with the general police of the armies, and in time of war would probably be increased.

*Invalids.*—This corps is made up of old *militaires* who are able to perform but little duty; it is divided into eighteen companies, but its present number is very small.

*Reserve.*—The sub-officers and soldiers who have, according to law, served in the active army for three years, are allowed to return home to their several occupations, though their names for two years longer are kept on the rolls of their corps, and they are still at the disposition of the Minister of War. This reserve constitutes two fifths of the effective force of the army. It constitutes in time of peace a part of the *landwehr* of the first bann. These fencibles (*landwehr*) are formed into three divisions: first and second banns of fencibles, and (third) the levy en masse, (*landstrum.*) Every Prussian subject between the ages of twenty and thirty-two is enrolled in the first bann of fencibles. The organization of these troops is similar to that of the regulars. The officers are usually appointed from among those who have, for some honorable reason, retired from the army. A commission is appointed to examine and propose the names of candidates to the King. The sub-officers are selected by the commandants of companies, usually from the sub-officers and soldiers who have once been in the regular service. A small number of these officers and sub-officers are kept on pay in time of peace, and charged with the magazines and various materiel of these forces. In time of peace these fencibles, or militia forces, are attached to the different corps d'armée of the line. Each corps d'armée (both regulars and militia) meet for two or three weeks every two years, to exercise in the grand manœuvres of war. Sometimes two corps d'armée unite together. In time of war some of the corps of regulars are incorporated with these fencibles. The second bann is composed of men between thirty-two and forty years of age. They are called out only in time of war, and are intended to garrison the fortifications in the absence of the active army. The *landstrum* is a *levée en masse* of all men between seventeen and twenty, and between forty and fifty years of age.

*Numbers.*—The effective force of the regular army in time of peace varies from 100,000 to 120,000 men. In time of war, when the establishment is complete and the reserves called in, the regular force amounts to about - - - - - - - 250,000 men

The contingent of the first bann of the landwehr, - - - - - 150,000 "

That of the second bann, - - 100.000 "

Total, - - - - - - 500,000

The organization is kept complete in time of peace, so as to be able at any moment to take the field. The whole force is divided into nine corps d'armée, one of the guard, and eight of the line.

According to the "Annuaire" of 1841, the Prussian army included one hundred and forty-three generals and six hundred and sixty-five superior officers, the Prince of Electoral Hesse and the Prince of Pays Bas, fourteen generals of infantry and cavalry, thirty-five lieutenant generals, ninety-two major generals, ninety colonels, seventy-eight lieutenant colonels, and four hundred and ninety-seven majors.

*Recruits.*—Every Prussian subject twenty years of age and in good health is incorporated in the active army, where he serves for two or three years in time of peace, after which he returns to his home and forms a part of the first bann of the landwehr till he is thirty-two; from thirty-two to forty he is classed in the second bann, and from forty to fifty in the landstrum.

*Discipline.*—The discipline in the Prussian army is very severe. The punishments pronounced by the military tribunals are death, imprisonment, hard labor for a limited time or for life, labor on the fortifications, and degradation. The courts are ordinary or general. The first are for regiments, divisions, and garrisons; the others for extraordinary occasions. Breaches of discipline may be tried by the council of discipline of the corps. The courts must try all delinquencies and crimes. An officer may be tried by a council of honor, and rendered incapable of promotion.*

*Rank and Pay.*—The officers of the Prussian army are much respected, and they deserve to be, for their education, zeal, and devotion to their country. The graduates of the school of cadets at Berlin, or of the school of artillery and engineers, receive the brevet of ensign or second lieutenant, according as they pass the examination. No one can be appointed ensign till he has passed through his school; and no ensign can be promoted till it has been agreed to by the superior commission of Berlin. Nor is his appointment then entirely in the power of Government. When a vacancy of second lieutenant occurs, the subalterns present to the commanding officer of the regiment the names of three ensigns who have completed their studies. The commandant selects the one he considers the most deserving of these three, and nominates him to the King, who confirms the choice. From the rank of second lieutenant to that of captain, inclusive, promotion is made by seniority of rank, except in the artillery and engineers, where no promotion to these grades can be made till the candidate has passed a satisfactory examination.

The pay of the commanding general in the field is about $11,000 per annum. The allowance to the lower grades is diminished in proportion to the diminution of rank. Some of the officers of the guards receive extra pay in certain cases for the supply of their tables. All draw rations of fuel. Below the rank of major general the pay is different for the different arms; that of the infantry and cavalry being one-fourth less than for the engineers and artillery. This results from the difference in qualifications required for rank in these corps. The pay is generally small, but the cheapness of living in that country, the ample provisions for the education of military children, for retired lists, and for widows' pensions, and, above all, the economical and industrious habits of the officers, make this pay fully sufficient for their support. No lieutenant is allowed to marry till he gives satisfactory proof that either he or his intended wife has a fixed income of about $500 per annum, over and above his army pay and emoluments. Very frequent opportunities are given to the officers to travel in other countries, and to become acquainted with the number, character, organization, &c., of foreign armies. They are also frequently called upon to fill civil offices. From 1823 to the end of 1839, a period of seventeen years, eight hundred and eighty-five officers and seventeen thousand two hundred and thirty six sub-officers and soldiers were employed in the civil administrations, thus very much diminishing the expenses of Government. Special pensions and doweries are given to officers who have distinguished themselves in arms. After the campaigns of 1814 and 1815 doweries were given to Marshal Blucher and several of the Prussian generals, yielding an annual income of from 2,000 to 10,000 dollars. One of the generals received, as late as April, 1841, a gift of 100,000 thalers. Sometimes fixed pensions are attached to particular honors and decorations. By an ordinance of August 1841, an annual life pension of one hundred and fifty thalers was granted to twelve officers and twelve sub-officers and soldiers who had received the iron cross of the first class, and a pension of fifty thalers to thirty-six officers and thirty-six sub-officers and soldiers of the iron cross of the second class. The standard of military education is very high in Prussia, and foreign officers who have visited that country pronounce the officers of all grades to be well instructed and well disciplined. The scientific corps of other armies owe much to the inventions and discoveries of the Prussian engineers and artillerists.

*Finances.*—In the year 1820, Prussia had a public debt of $160,000,000; in 1840, this debt was reduced to $120,000,000. She has a considerable fund laid aside as a reserve for war. The annual expenses of Government amount to about $38,000,000. The annual receipts slightly exceed this amount, and the surplus is applied to extraordinary expenses, liquidation of the public debt, and the supply of the war-reserve. The State and Crown lands furnish a revenue of $1,650,000, which is applied to the support of the King, princes, and the civil list.

* For an abstract of a very recent ordinance by the King, respecting this council, see Chronicle, p. 453.

We add here Haillot's table of the strength of the armies supported by Prussia, from 1790 to 1815.

The strength of the Prussian army in 1790, was 171,000 infantry, 41,000 cavalry, and 8,000 artillery. The number of disposable forces, after deducting those necessary for garrisons and depots, was only about 180,000 combatants.

The Prussian army which invaded France in 1792, under the Duke of Brunswick, was forty-seven battalions and seventy squadrons, in all, about 42,000 men. The whole military force of Prussia at this time amounted to about 160,000, men.

The Prussian army on the main Rhine, under the King in 1793, was 56,618 men; that on the lower Rhine, 11,400 men.

The army which Prussia sent against France in 1794, and till the peace of Bâle in 1795, was about 60,000; besides this she had an army of from forty to fifty thousand men in Poland.

At the declaration of war in 1806, out of a military force of 240,000, Prussia had an active army of 170,000 men. This fine army was destroyed by the short winter campaign of 1806 and 1807, and by the treaty of Tilsitt the King was obliged to reduce his forces to 60,000. But on the re-organization of the army arrangements were made to instruct, and, in a few days, prepare for the field, a force of 180,000 men.

In 1812, Prussia furnished Napoleon a corps of 30,000 men for the Russian expedition.

In 1813, Prussia, having acceeded to the alliance of Russia against France, raised an army by the end of April of 110,000 combatants. This force was increased to 120,000 men, at the expiration of the armistice for the autumn campaign, without including the numerous battalions of landwehr (militia) which were every where organized.

In 1814, Prussia had in France and Germany a force of 200,000 men.

In 1815, her army in Belgium was only 80,000 men at the commencement of hostilities, but she soon increased her forces to 200,000, as in the preceding year.

We learn from the "Spectateur Militaire" that the Prussian army in the campaigns of 1813–14, consumed 52,636 balls of from three to twelve livres, 12,627 howitz, and 8,618 biscaiens, making a total of 73,881 projectiles, and about 1,693 quintaux of powder. In the combats of Liepzig, from October 14 to 19, 14,193 projectiles (balls or howitz) were fired from 240 pieces; at Lutzen, 8,654 from 128 pieces; at Bautzen, 7,686 from 135 pieces; before Paris, 4,499 from 96 pieces; at Dennewitz, 4,411 from 86 pieces; at Katzback, 3,605 from 76 pieces; at Gros-Beeren, 2,095 from 55 pieces; at Kulm, 1,918 from 96 pieces; at Dresden, 1,792 from 108 pieces; and at Wartenburg, 1,205 from 32 pieces. The Prussian artillery lost in these two campaigns in killed, 14 officers, 468 non-commissioned officers and privates, and about 1,500 horses; in wounded, 38 officers, and 982 non-commissioned officers and privates; 178 pieces of artillery were dismounted, and 15 lost.

*(To be continued.)*

## A NOTICE OF SOME OF THE FOREIGN MILITARY PERIODICALS.

COLLECTED BY H. W. H.

### I. FRANCE.

The military journals of France are decidedly the best in the world, and first upon this list, beyond all doubt, is the

*Memorial de l'officier du Génie.*—This work is drawn up under the direction of the French Board of Engineers, and published by direction of the Minister of War. It contains the memoirs, experiments, observations, &c., of the officers of the engineer corps, on fortification, attack and defence, military and civil construction, and the several branches of military science. It is published irregularly in octavo exclusively for the officers of the engineer corps. Its contents are always of much interest to the military and scientific student. The work commenced many years ago, and has now reached its thirteenth number.

2. *Journal Militaire Officiel* contains all the laws, ordinances, circulars, regulations, &c., relative to the army. It was begun in 1790, and has reached over the hundredth volume. It is published once a week in octavo. The subscription price is fifteen francs at Paris, and twenty francs in the departments.

3. *Journal des Sciences Militaires* is published monthly. The subscription price per annum at Paris is forty-two francs, and to foreigners fifty-four francs. It contains memoirs on the several branches of military science, and reviews of French and foreign military works. It frequently contains valuable maps and plans.

4. *Le Spectateur Militaire* is also a monthly publication, making two handsome volumes per year. Its subscription price is thirty francs per annum at Paris, and thirty-six francs per annum to foreigners. It is published under the direction of twenty-six "fondateurs et principaux collaborateurs," including some of the most distinguished military names in the French army. It is conducted with great ability and fairness; its articles are well written, and frequently contain much valuable military information. Its maps and plans are executed with great neatness and care. On the whole this journal, though inferior in scientific character to the Mémorial du Génie, is the most readable and interesting of any we have seen. Instead of lumbering its pages with long and prosy extracts from other publications, its summaries of domestic and foreign military news are perfect models of clearness and brevity.

5. *Le Sentinelle* appears once in every eight days, and is devoted to the general interests of the army. Its subscription price is sixteen francs per annum, or twenty francs to foreigners.

6. *Journal de l'Armée* is published at Paris every Sunday at fifteen francs per annum to home subscribers, or seventeen francs to foreigners. We are not familiar with the character of its contents.

7. *Journal des Armes Spéciales* is a very interesting monthly publication on technical subjects.

The Paris price is ten francs, and twelve francs for the departments.

8. *Journal de l'Infantrie et de la Cavalrie*, is an octavo journal, devoted to the interests of these two particular arms. It contains maps, portraits, plates of military costumes, &c., &c. It would be found to contain much interesting and valuable military information for the officers of these arms in our own service. Its subscription price is ten francs.

9.—*Mémorial de l'Artillerie*, is a collection of memoirs, experiments, &c., in the artillery service, drawn up by the Board of Artillery, and published by direction of the Minister of War.

10. *Mémorial Topographique et Militaire*. is compiled at the General War Dépôt, and published by order of the Minister. These two works are after the plan of the Mémorial de l'Officier du Génie.

11. *Annuaire Militaire, Historique, Topographique, Statistique, et Anecdotique*, is published once a year in octavo, by a society of literary and military gentlemen, under the direction of Captain Sicard. It contains much valuable information.

II. PRUSSIA.

1. *Militair Wochenblatt*, (Military Weekly Paper.) This is a quarto weekly pamphlet, published by the general staff of the army. It has been continued for more than twenty five years. It contains all official orders for promotions, changes, &c., and many articles on the art of war, reviews of military books, and biographies of distinguished military men.

2. *Zeitchrift für Kunst, Wissenschaft, und Geschichte des Krieges*, (Journal of Art, Science, and Military History.) This is an octavo pamphlet, issued nine times per annum, making three volumes each year. It was begun in 1824 Its two directors are high officers of artillery and engineers. Its contents are valuable, authentic, and well written.

3. *Militair Literatur Zeitung*, (Military and Literary Gazette.) This is a quarto journal issued every other month, making one volume per annum. It contains a review of all new military books, and all publications on mathematics, physics, and chemistry.

4. *Archiv für die Officiere der Koniglish-preussischen Artillerie und Ingenieur Corps*, (Archives for the Officers of the Royal-Prussian Artillery and Engineer Corps.) This is an octavo work, published once in two months. It was commenced in 1836, and has been most ably conducted by two high officers of the two corps. Its papers are exceedingly valuable and interesting, and the officers of engineers and artillery in our service should find some means of becoming acquainted with their contents. If the paper were taken in the Library of the War Department, and some officer would translate for publication in the Chronicle such portions as would be of interest to our service, it might be productive of much public good.

III. AUSTRIA.

*Œstreichische Militairische Zeitschrift*, (Austrian Military Journal.) This is the only military magazine published in Austria. Its principal editor is Major Schels, librarian and empolyé in the war archives. It is issued monthly in octavo, three numbers making a volume. It was begun in 1811, but its publication was discontinued from 1814 to 1818. This journal is highly esteemed in Germany; it contains many interesting articles on all branches of military science, and its series of historical articles on the wars of Austria add greatly to its value. This series contains a history of all the wars since the battle of Crecy, in 1346. Its facts are drawn from the archives of war, and are considered and consulted as authentic documents. No one could write an authentic history of the wars of Austria without consulting this journal.

IV. RUSSIA.

The following are the principal military journals published in Russia.

1. *The Military Gazette or Russian Invalid*, is published at St. Petersburg daily, Sundays excepted, in quarto. It is the official journal of Government, and contains all ukases, orders, changes, &c., relative to both army and navy. Every Wednesday and Saturday it contains a supplement devoted to military literature. This journal commenced in 1813.

2. *The Military Journal*, is compiled by a board of staff officers, and appears once in two months. This is a valuable military paper, containing original articles on the military art and sciences, and on military history. It is frequently illustrated by fine maps and plates.

3. *The Engineer Journal*, is published by order of the inspector general of engineers, and compiled by the engineer commission on military studies. It is intended to complete the instruction of engineer officers, and keep them acquainted with the progress of military science. It is published monthly at St. Petersburg, accompanied by fine maps and plans.

4. *The Journal of Medical Military Science*, is published monthly at St. Petersburg, for the use of the medical officers of the army.

5. *The Prikas*, is an official military evening journal, containing all the orders, &c., relating to the army.

V. ENGLAND.

1. *Professional Papers of the Royal Engineers.* This work is published on the plan of the French *Mémorial de l'Officier du Génie*, and its contents are of the same general character; but very far inferior in merit. Nevertheless it is a valuable and praiseworthy publication.

2. *The United Service Journal*, (or *Magazine*, as it is now called,) is a large monthly paper published in London, by Colburn, at $10 per annum. It contains much interesting military reading of a newspaper rather than a scientific character. A large portion of its pages is devoted to naval matters.

VI. SPAIN.

*El Archivo Militar*, (or the Military Archive,) was formerly published at Madrid every Thursday, at eighty-four reals* per annum. On the 1st of September, 1841, the manner of issuing it was changed. The first part, called the military section, containing only military matter, is still published every Thursday. A second section, called legislative, is issued

* One real is worth 0 francs, 25 c. 7.

every Saturday, containing laws, regulations, &c. that would be interesting to the army. Finally, a third part, published separately, contains articles on politico-military subjects, and also a variety of other papers.

This periodical contains much interesting readable matter and valuable statistical information. Its publication is said to have given an impulse to the education of the army, and awakened attention to the importance of sound military instruction.

*La Egida*, is a new Spanish military periodical published at Madrid, on the 25th of each month, at two and a half francs a number. Its character is that of a review. It is very highly spoken of in the French papers.

We have now completed our list of the principal foreign military periodicals. Any of the above mentioned works can be subscribed to through the booksellers in New York, and imported without much expense. If some of them were taken at our military posts, and their most valuable articles translated by such of our officers as are familiar with the languages in which they are written, and republished in the Chronicle, it would benefit the whole service.

## GENERAL BERTRAND.

The New York Tribune has the following notice of this distinguished soldier, now on a visit to the United States:

Marshal Bertrand.—This distinguished stranger is now in our city, and he well merits all the attention that has been or will be shown him. We have always had a greater respect for his character than for Bonaparte's. The unfaltering attachment he maintained for that wonderful man, through every vicissitude of his strange fortune, evinces a noble heart. We do not believe there ever was a created being for whom Napoleon could have cherished the same *affection* in the midst of such disgrace and desertion. There is really something melancholy, in the utter blindness and abandonment with which he cast his fortunes in with the fortunes of that fated man. And there are few men for whose calm reflections we would give more than for his, as he stands amidst this free, happy people, and looks back on the tumultuous life through which he has passed. Others have passed through as fierce battles and imminent dangers as he; yet few through scenes that read such earnest lessons on human ambition. And when he contrasts Washington with Napoleon, the patriotism of the one with the selfishness and ambition of the other, he cannot but see that the man for whom he sacrificed so much could have done better for France than he did.

Bertrand has been a soldier from his youth. Before the star of Napoleon rose over the troubled nations of Europe, he was a soldier of France. Afterwards he became a part of the Corsican's destiny. He was with him on the Danube, and made a road over it for his conquering army. He fought at the battle of Lutzen, and followed Napoleon in his victorious campaigns, till Marmont's treason sent him to Elba. He shared his year's exile, and was at his right hand when he again entered Paris amid the shouts of the people. He went with him at last to the fatal field of Waterloo, and saw there the mighty drama end. We never hear the name of Bertrand mentioned without thinking of his last effort to save Bonaparte at the close of that dreadful battle. When victory had again and again been within his grasp, and again and again snatched from it, and Blucher had at length effected a junction with the allied forces, Napoleon, as a last desperate effort, led on his unconquered Imperial Guard. When about half way to the enemy's line he stopped, and addressed them, telling them of the trust he committed to them. The cry of "Vive le Empereur" that replied, was heard all over the field of battle: and under Ney they defiled before him, and marched with a firm and steady step and in dead silence on the foe.

Bertrand remained behind with him, and watched the brave fellows ascend the eminence, and move undauntedly forward to settle the fate of Bonaparte, France, and Europe. This Guard of 1,500 had never been vanquished, and the allied forces saw with awe the troops that had been the terror of Europe, move steadily down upon their centre. The fire suddenly abated. But the pause was only momentary. Every cannon seemed to open at once, and whole ranks were swept away. But that unconquerable guard knew the eye of their chieftain was upon them, and with stern, unshaken front, continued to advance. They pressed on through blood and slaughter, carrying every thing before them, till they penetrated within the enemy's line. Bertrand stood beside Napoleon, and watched this terrific strife, on which such awful results rested; and on the approach of that fearless guard, that nothing seemed able to check, until they had reached within fifty yards of where Wellington stood. A volley then opened on them that nothing could resist. They reeled and staggered to the shock, and turned and fled in confusion. Napoleon seeing his invincible guard routed and cut to pieces, gnashed his teeth with rage, and instantly resolved to rally the fugitives in person, and lead them on to one more desperate effort, doubtless with the purpose of retreiving his loss, or dying on the field of battle.

In this critical situation, Bertrand, with Drouet, threw himself before him, and besought him with an importunity that would not be denied to forbear. They told him how much the safety of France and the army depended on his life; and at last persuaded him to desist. Decoster says that Napoleon then turned to Bertrand, and said, "*It is finished*," and galloped off with his suite. Through that long and terrible night, Bertrand fled by his side, while the thunder of artillery came at intervals on the midnight air, telling them what a bloody field and ruined hopes lay behind. But Bertrand's affections never faltered. It remained the same when, without a crown, helpless and poor, Bonaparte passed to the rock that was to be his tomb. Bonaparte should have been prouder of that affection than of his hundred victories. It was worth the loss of a crown to know that he could bind so closely to him such faithful and devoted hearts.

# WASHINGTON.

THURSDAY, NOVEMBER 2, 1843.

The last tribute of respect has been paid to the remains of the late Commodore ALEXANDER CLAXTON. They were interred on Monday last, with appropriate military honors, at Green Mount Cemetery, Baltimore. Long may it be before the last tribute shall be paid to his memory.

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The appeal made by the press a few weeks since in behalf of the suffering survivors of the officers and crew of the *Grampus* has not been passed unheeded. An additional word or two now, while the subscriptions are open, might have a happy effect. Some have already spoken it.

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The second edition of MAURY'S NAVIGATION has gone to press, and will be out in a few days.

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It becomes our painful duty to record the death, by suicide, of Lieut. GEORGE J. WYCHE, of the U. S. Navy, in Boston, on the morning of the 25th ult. The coroner returned a verdict that the deceased came to his death by hanging himself "with his own hands, while in a state of partial derangement, caused by intoxication."

Lieut. THATCHER stated in evidence that he had frequently noticed of late that the deceased exhibited symptoms of mental derangement, and that others had remarked and spoke of it. Lieut. PARKER, whose testimony was not taken, is of opinion that the deceased was not at all intoxicated when he left him, a few hours previous to the sad catastrophe.

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The following notice is published in the Madisonian, that the friends of those in the different squadrons may avail themselves of it:

The store-ship Lexington, now at New York, will sail in a few days, probably about the 3d of November, for the Mediterranean; and the store-ship Consort, now at Boston, will sail about the 5th of November for the Coast of Africa; and a store-ship will sail from Norfolk for Rio, about the 15th November.

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APPOINTMENTS.—The following appointments have recently been made in the Brooklynnavy-yard:

Jesse M. Folk, master laborer, in place of Nicholas Rhodes; Jonathan Rogers, ex-alderman, in place of Wm. Cumberson, master joiner; Samuel W. Sale, lumber inspector, in place of John Naylor; Daniel Ladd, in place of John P. Hill, master blacksmith; Mr. Denike, of New York, master spar-maker, in place of Titus Dodge; Joseph Simmons, inspector of timber, in place of Aaron Storer.—*Brooklyn Star.*

## HYDROGRAPHICAL OFFICE.

WEATHER JOURNAL FOR THE WEEK ENDING SATURDAY, OCTOBER 14, 1843.

| DAYS. | Barometer. | THERMOMETERS. Attach. | Sun. | Rad. | Shade. | W. Bulb. | Dew Point. | WEATHER. | Portion cloudy. | WIND. | Force. | Rain, inches. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Monday, 3 A. M. | 29.870 | 65° | 37° | 37° | 44 5' | 41° | 33° | Cumulus. | .2 | NW. | Light. | |
| Do. 3 P. M. | 29.814 | 65 | 85 | 92 | 59 | 49 | 36 | Cirrus. | .4 | S. & E. | Airs. | |
| Tuesday, 3 A. M. | 29.813 | 66 5' | 44 | 46 | 50 5 | 44 | | " | .3 | Calm. | .0 | |
| Do. 3 P. M. | 29.936 | 65 | 81 | 94 | 61 | 50 | 47 | Cumulus. | .4 | N. & W. | Light. | |
| Wednesday, 3 A. M. | 30.022 | 68 | 38 | 41 | 45 5 | 42 | | Cirrus. | .1 | Calm. | .0 | |
| Do. 3 P. M. | 30.010 | 68 | 93 | 106 | 68 | 58 | 48 | Clear. | .0 | " | | |
| Thursday, 3 A. M. | 29.976 | 72 | 44 | 46 | 52 | 48 | 43 | Cumulus. | .3 | N. & W. | Mod. | |
| Do. 3 P. M. | 29.900 | 72 | 91 | 106 | 69 5 | 60 | 43 | Clear. | .0 | " | Light. | |
| Friday, 3 A. M. | 30.082 | 68 | 40 | 40 | 49 | 41 | 38 | Nimbus. | .0 | NW. | Fresh. | |
| Do. 3 P. M. | 30.108 | 67 | 48 | 51 5' | 51 " | 48 | 48 | Clear. | .0 | " | Mod. | |
| Saturday, 3 A. M. | 30.222 | 66 | 35 | 35 | 41 | 36 | | Cirrus. | .1 | " | Fresh. | |
| Do. 3 P. M. | 30.318 | 50 5 | 80 | 93 | 53 | 42 | 34 | | | | | |

Maximum variation of the needle, October 12, at 2 P. M., . . . 1° 35' 27."
Minimum, " 14, at 8 A. M., . . . 1° 26' 35."
Mean variation for the week, . . . . . 1° 30' 46."

## HYDROGRAPHICAL OFFICE.

WEATHER JOURNAL FOR THE WEEK ENDING SATURDAY, OCTOBER 30, 1843.

| DAYS. | Barometer. | THERMOMETERS. Attach. | Sun. | Rad. | Shade. | W. Bulb. | Dew Point. | WEATHER. | Portion cloudy. | WIND. | Force. | Rain inches. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Monday, 3 A. M. | 30.200 | 67° | 37° | 39° | 45 5' | 41° | 38° | Cumulus. | .4 | Calm. | | |
| Do. 3 P. M. | 30.006 | 65 | 50 | 54 | 53 | 44 | 36 | Cirrus. | .6 | N. & E. | Mod. | |
| Tuesday, 3 A. M. | 30.032 | 62 | 30 | 30 | 38 | 32 | 28 | Clear. | | | | |
| Do. 3 P. M. | 30.000 | 65 | 73 | 83 | 56 | 43 | 43 | Cumulus. | .4 | West. | Mod. | |
| Wednesday, 3 A. M. | 30.080 | 65 | 31 | 31 | 39 | 35 | 29 | Clear. | | Calm. | | |
| Do. 3 P. M. | 30.012 | 64 5' | 81 | 88 | 61 5 | 49 | 45 | Clear. | | S. & W. | Mod. | |
| Thursday, 3 A. M. | 29.990 | 65 5 | 47 | 50 | 52 | 48 | 39 | Cumulus. | | South. | Light. | |
| Do. 3 P. M. | 30.206 | 65 | 80 | 96 | 58 | 46 | 38 | Clear. | | N. & W. | | |
| Friday, 3 A. M. | 30.332 | 66 5 | 30 | 31 | 38 | 34 | 26 | Clear. | | Calm. | | |
| Do. 3 P. M. | 30.200 | 69 | 88 | 100 | 67 | 56 | 42 | " | | South. | Mod. | |
| Saturday, 3 A. M. | 30.072 | 68 5 | 49 5' | 51 | 56 | 51 | 44 | " | | Calm. | | |
| Do. 3 P. M. | 29.916 | 73 5 | 92 | 100 5' | 74 5 | 62 | 53 | " | | S. & W. | Mod. | |

Maximum variation of the needle, Oct. 17, at 20 h. Gottingen time, . . 1° 34' 53" 8
Minimum, " 19, at 4 h. " " . . 1° 22' 58" 8
Mean variation for the week, . . . . . 1° 30' 54" 2.

## Revenue Service.

### LIST OF OFFICERS,

CORRECTED TO NOVEMBER 1, 1843.

#### *Captains.*

| Name. | Where born. | Date of commission. | Name of vessel. |
|---|---|---|---|
| J. A. Webster, | Md., | Nov. 22, 1819, | Ewing. |
| W. Foster, | Va., | Mar. 22, 1821, | Woodbury |
| H. D. Hunter, | Penn., | Nov. 15, 1824, | Forward. |
| W. W. Polk, | Md., | July 25, 1825, | Duane. |
| A. Mather, | Conn., | April 4, 1829, | On leave. |
| R. Day, | N. Y., | June 2, 1832, | Crawford. |
| E. Jones, | Mass., | Jan. 4, 1833, | Morris. |
| T. C. Rudolph, | Ga., | June 2, 1834, | Waiting ord. |
| C. Currier, | N. H., | April 20, 1838, | Sick. |
| G. Walden, | Me., | Nov. 21, 1838, | Nautilus. |
| H. B. Nones, | Va., | Dec. 14, 1838, | Van Buren. |
| J. Sturgis, | Mass., | Dec. 14, 1838, | Hamilton. |
| H. Prince, jr., | Mass., | Oct. 24, 1839, | Wolcott. |
| J. Whitcomb, | Me., | Dec. 9, 1839, | Alert. |
| G. Knapp, | Mass., | Mar. 15, 1841, | Erie. |
| L. C. F. Fatio, | Penn., | May 12, 1841, | Madison. |
| M. Conner, | Penn., | Jan. 19, 1842, | Jackson. |
| A. V. Fraser, | N. Y., | Feb. 1, 1842, | Bureau at Wash'ton. |
| W. A. Howard, | Me., | Dec. 19, 1842, | Special duty. |
| R. Evans, | Va., | July 20, 1843, | Taney. |

#### *First Lieutenants.*

| | | | |
|---|---|---|---|
| N. L. Coste, | S. C., | Jan. 4, 1833, | Van Buren. |
| W. B. Whitehead, | Va., | June 11, 1834, | Crawford. |
| G. Moore, | Md., | Feb. 10, 1836, | Special duty. |
| Levi C. Harby, | S. C., | July 5, 1836, | Reve. boat, St. Mary's. |
| John J. Nimmo, | Va., | April 23, 1838, | Woodbury. |
| D. Ottinger, | Penn., | Aug. 6, 1838, | Special duty. |
| C. Grover, | Penn., | Aug. 6, 1838, | Forward. |
| Thomas Sands, | Md., | Nov. 21, 1838, | Wolcott. |
| T. Stoddard, | Mass., | Dec. 14, 1838, | Alert. |
| F. Martin, | N. Y., | July 24, 1839, | Ewing. |
| S. Cornell, | R. I., | Oct. 24, 1839, | Jackson. |
| J. A. Noyes, | Me., | Oct. 24, 1839, | Special duty. |
| J. McGowan, | Penn., | Feb. 17, 1841, | Special duty. |
| J. H. Roach, | Me., | Feb. 17, 1841, | Hamilton. |
| G. Clarke, | Va., | Nov. 17, 1842, | Nautilus. |
| J. B. Fulton, | Va., | Mar. 4, 1843, | Morris. |
| J. S. S. Chaddock, | Me., | Aug. 28, 1843, | Special duty. |
| B. Digges, | Md., | Aug. 28, 1843, | Taney. |
| S. C. Foss, | N. H., | Aug. 28, 1843, | Reve. boat Castine. |
| J. J. Morrison, | Ga., | Aug. 28, 1843, | Madison. |

#### *Second Lieutenants.*

| | | | |
|---|---|---|---|
| S. Thatcher, | Conn., | Jan. 18, 1831, | Sick. |
| G. Berryman, | Penn., | Aug. 6, 1838, | Erie. |
| A. Burrough, | N. J., | Dec. 14, 1838, | Morris. |
| Osmond Peters, | Va., | July 24, 1839, | Van Buren. |
| C. Prouty, | Mass., | Dec. 9, 1839, | Hamilton. |
| J. Amazeen, | N. H., | Dec. 9, 1839, | Madison. |
| W. Norris, | R. I., | Feb. 17, 1841, | Wolcott. |
| J. Faunce, | Mass., | June 5, 1841, | Forward. |
| W. B. McLean, | N. Y., | Sept. 24, 1842, | Woodbury. |
| H. H. Greene, | N. H., | Nov. 17, 1842, | Alert. |
| J. L. Prouty, | Mass., | Mar. 4, 1843, | Jackson. |
| W. Pease, | Mass., | Mar. 4, 1843, | Ewing. |
| C. W. Bennett, | Del., | Mar. 4, 1843, | Wolcott. |
| J. L. Stull, | Md., | Mar. 4, 1843, | Bureau at Wash'ton. |
| E. Smoot, | Ala., | Mar. 4, 1843, | Duane. |
| W. M. Wilson, | S. C., | Mar. 4, 1843, | Crawford. |
| J. G. Breshwood, | Va., | Mar. 4, 1843, | Taney. |
| N. Austin, | R. I., | Mar. 4, 1843, | Nautilus. |
| J. M. Jones, | Md., | Aug. 28, 1843, | Jackson. |

#### *Third Lieutenants.*

| | | | |
|---|---|---|---|
| G. Hayes, | Me., | Feb. 17, 1841, | Alert. |
| J. H. Jones, | Del., | Feb. 17, 1841, | Wolcott. |
| R. K. Hudgins, | Va., | Feb. 24, 1841, | Taney. |
| E. Gooding, | Me., | Nov. 17, 1842, | Woodbury. |
| J. T. Stonsall, | N. Y., | Nov. 17, 1842, | Ewing. |
| J. A. Webster, jr., | Md., | Nov. 17, 1842, | Taney. |
| J. Murch, | Del., | Jan. 16, 1843, | Gallatin. |
| W. H. Brown, | Mass., | Jan. 17, 1843, | Forward. |
| J. Hendren, | Va., | Jan. 26, 1843, | Ewing. |
| R. S. Jones, | Va., | Jan. 27, 1843, | Madison. |
| E. C. Kennedy, | Va., | Jan. 28, 1843, | Morris. |
| W. R. Pierce, | Va., | Jan. 30, 1843, | Wolcott. |
| W. S. Bell, | Va., | Feb. 6, 1843, | Duane. |
| C. L. Collier, | Va., | Mar. 1, 1843, | Van Buren. |
| H. J. Benson, | Conn., | Mar. 6, 1843, | Erie. |
| C. Saunders, | N. C., | Mar. 6, 1843, | Jackson. |
| B. W. Frobel, | Va., | Mar. 6, 1843, | Crawford. |
| C. F. Wood, | Dis. Col., | Mar. 6, 1843, | Hamilton. |
| H. Parmelee, | Conn., | Mar. 7, 1843, | Hamilton. |
| K. S. Woodward, | Conn., | Mar. 11, 1843, | Nautilus. |
| H. N. Tracy, | Conn., | July 20, 1843, | Reve. boat, Lake Ont. |

#### LIST OF WARRANT OFFICERS.

##### *Pilots.*

| Names. | Place of birth. | Date of warrant | Stations. |
|---|---|---|---|
| R. Ryder, | N. Y., | Oct. 4, 1843, | New York. |
| H. Lewis, | Mass., | Oct. 11, 1843, | Newport. |
| I. S. Sanner, | Md., | Oct. 11, 1843, | Baltimore. |
| S. Church, | Phila., | Oct. 19, 1843, | Savannah. |
| J. Egan, | Fl'da., | Oct. 19, 1843, | Key West. |

##### *Boatswains.*

| | | | |
|---|---|---|---|
| J. Welsh, | Ireland, | Oct. 4, 1843, | New York. |
| J. J. Butcher, | Eng., | Oct. 5, 1843, | Boston. |
| J. Kreuger, | Mass., | Oct. 5, 1843, | Eastport. |
| S. Ward, | R. I., | Oct. 11, 1843, | Newport. |
| J. Harvey, | Eng., | Oct. 11, 1843, | Delaware. |
| J. S. Williams, | Md., | Oct. 11, 1843, | Baltimore. |
| J. Webber, | Eng., | Oct. 11, 1843, | Norfolk. |
| E. Butler, | Eng., | Oct. 19, 1843, | Savannah. |
| A. W. White, | Penn., | Oct. 19, 1843. | Presque Isle |
| G. Stoddard, | Mass., | Oct. 27, 1843, | Charleston. |

##### *Gunners.*

| | | | |
|---|---|---|---|
| G. A. Booth, | Ireland, | Oct. 4, 1843, | New York. |
| A. Jones, | Mass., | Oct. 5, 1843, | Boston. |
| J. Saddler, | Me., | Oct. 5, 1843, | Eastport. |
| J. Smith, | Ireland, | Oct. 11, 1843, | Newport. |
| W. Spear, | Eng., | Oct. 11, 1843, | Delaware. |
| W. Mears, | Md., | Oct. 11, 1843, | Baltimore. |
| W. Bissell, | Va., | Oct. 11, 1843, | Norfolk. |
| D. Ross, | Md., | Oct. 19, 1843, | Savannah. |
| G. S. Neath, | Penn., | Oct. 19. 1843, | Key West. |
| G. W. Smith, | Md., | Oct. 27, 1843, | Charleston. |

##### *Carpenters.*

| | | | |
|---|---|---|---|
| P. C. Green, | N. Y., | Oct. 4, 1843, | New York. |
| L. L. Sopher, | Me., | Oct. 4, 1843, | Portland. |
| F. Gibson, | Denmark, | Oct. 5, 1843, | Boston. |
| A. Winchester, | N. S., | Oct. 5, 1843, | Eastport. |
| L. Butler, | Mass., | Oct. 11, 1843, | Newport. |
| W. H. Harley, | Md., | Oct. 11, 1843, | Delaware. |
| E. North, | Md., | Oct. 11, 1843, | Baltimore. |
| J. P. Jarvis, | Va., | Oct. 11, 1843, | Norfolk. |
| T. Booth, | Eng., | Oct. 19, 1843, | Savannah. |
| A. M. Tarbell, | Penn., | Oct. 19, 1843, | Erie. |
| E. A. Patterson, | Ga., | Oct. 27, 1843, | Charleston. |

#### LIST OF REVENUE VESSELS AND STATIONS.

| | | |
|---|---|---|
| Alert, | Eastport, | Dist. of Passamaquoddy. |
| Morris, | Portland, | Portland. |
| Hamilton, | Boston, | Boston. |
| Jackson, | Newport, | Newport. |
| Madison, | New London, | New London. |
| Ewing, | New York, | New York. |
| Wolcott, | Wilmington, | Delaware. |

| | | |
|---|---|---|
| Forward, | Baltimore, | Baltimore. |
| Taney, | Norfolk, | Norfolk. |
| Van Buren, | Charleston, | Charleston. |
| Crawford, | Savannah, | Savannah. |
| Nautilus, | Key West, | Key West. |
| Duane, | Mobile | Mobile. |
| Woodbury, | New Orleans, | New Orleans. |
| Erie, | Lake Erie, | Presque Isle. |

REVENUE BOATS COMMANDED BY REVENUE OFFICERS.

| | | |
|---|---|---|
| Veto, | Castine, | Castine. |
| Active, | Lake Ontario, | Sackett's Harb'r. |
| Ingham, | St. Mary's, | St. Mary's. |

ORDERS.

Oct.

30—2d Lieut. Joseph Amazeen, Madison, New London.

2d Lieut. Nicholas Austin, Nautilus, Key West.

31—2d Lieut. Charles W. Bennett, special duty. Oswego, New York.

## ARMY.

REGULATION.

WAR DEPARTMENT,
*October* 25, 1843.

The Regulation of February 12, 1839, in relation to the appointment of Sutlers, is hereby rescinded. The appointments will hereafter be made by the Department.

J. M. PORTER.

ADJUTANT GENERAL'S OFFICE,
WASHINGTON, *October*, 1843.

The foregoing Regulation is published for the information of the army.

BY ORDER: R. JONES, *Adjt. Gen.*

3D INFANTRY.—The resignation of Captain Otis Wheeler has been accepted, to take effect February 28, 1844.

## Naval Intelligence.

U. S. VESSELS OF WAR REPORTED.

Schooner *Phenix*, Lieut. Com. A. Sinclair, from Norfolk, bound to Chagres, arrived at Kingston, Jamaica, September 21st, and sailed on the 22d.

HOME SQUADRON.—The following is a list of the officers of the frigate *Independence*, at New York, from a cruise, last from Prince Rupert's Bay:

Commodore Charles Stewart.

Captain Isaac McKeever.

Lieutenants, Sidney S. Lee, J. F Schenck, J. S. Palmer, F. Huger, A. L. Holcomb, A. S. Baldwin.

Surgeon, J. M. Green, Assistant Surgeons, Jas. M. Minor, C. H. Wheelright.

Purser, F. B. Stockton.

Chaplain, Joseph Stockbridge.

Acting master, Jas. M. Biddle.

Passed Mid., F. A. Parker, jr., C. Benham, B. N. Westcott, C. M. Morris A. J. Drake.

Midshipmen, G. V. Fox, E. Allen, F. W. Colby, A. Barbot, J. P. Bankhead, R. Milligan, W. S. Cushman, A. F. Monroe, A. J. Mitchell, H. St. George Hunter.

Commodore's Secretary, T. Stewart.

Commodore's Clerk, A. B. Ashton.

Captain's Clerk, W. A. Poor.

Purser's Clerk, J. Salter.

BRAZIL SQUADRON.—The following is a list of the officers attached to the schooner *Enterprise*, at Rio de Janeiro, on the 1st of September:

Lieut. Commandant, James M. Watson, (late 1st Lieut. of Columbus, 74.)

Lieutenants, Francis B. Renshaw, Chas. Hunter.

Purser, Edward Bissell.

Ass't Surgeon, James McClelland.

Midshipmen, Thomas Lloyd Dance, John T. Walker, and Jeff. H. Nones.

Captain's Clerk, Daniel Noble Johnson.

PACIFIC SQUADRON.—The frigate *Savannah*, Commander Fitzhugh, sailed from New York on Thursday last, for Rio de Janeiro and the Pacific.

The following is a list of the officers of the sloop-of-war *Warren*:

Commander, Joseph B. Hull.

Lieutenants, Robert B. Hitchcock, George Minor, Wm. L. Maury, R. S. Trapier.

Master, George Colvocoressis.

Surgeon, Wm. J. Powell.

Purser, T. R. Ware.

Professor, Bartholomew McGowan.

Ass't Surgeon, Edward Hudson.

Passed Midshipman, R. A. Knapp.

Midshipmen, Frederick Kellogg, A. W. Johnson, John G. Whitaker, P. H. Haywood, R. D. Minor, A. M. deBree, J. McRoberts.

Boatswain, John Brown.

Gunner, John Owins.

Carpenter, Joseph Knight.

Sailmaker, John Joins.

Purser's Clerk, Wm. Jones.

Passenger, Capt. Brevoort, Marine Corps, to command marines on Brazil station.

AFRICAN SQUADRON.—Frigate *Macedonian*, Captain I. ayo, arrived at Port Grande, island of St. Vincent, one of the Cape de Verds, on the 9th September. All well.

## Marriages.

At Brownland, N. C., on the 11th ultimo, Lieut. CHARLES H. KENNEDY, of the navy, to Miss M. A., daughter of Dr JOHN BROADIE.

On the 31st ultimo, Lieut. CHARLES F. WOOD, of the Revenue Service, to Miss SARAH CATHERINE, only daughter of the late JOHN S. COMPTON, Esq., of Georgetown, D. C.

## Deaths.

In New York, on the 22d ultimo, GEORGE THORNTON, infant son of Lieut. GEORGE F. EMMONS, U. S. navy.

At Brooklyn, N. Y., on the 23d ultimo, in the 23d year of her age, MARY ANTOINETTE ST. FELIX, wife of Lieut. FRANCIS B. ELLISON, U. S. navy, and daughter of JOHN R. ST. FELIX.

At Boston, on the 25th ultimo, Lieut. GEORGE J. WYCHE, U. S. navy.

In this city, yesterday morning, GERTRUDE MARGARET, youngest daughter of Col. JOSEPH G. TOTTEN, Chief Engineer, U. S. Army.

Oct. ARRIVALS AT WASHINGTON.

12—Ass't Surgeon J. B. Porter, Fuller's.
Capt. J. H. Winder, 1st art'y, Polk's.
Major W. Seawell, 7th inf'y, Fuller's.

14—Capt. W. H. Swift, Top. Engrs., Mrs. Ulrick's.
Ass't Surgeon Wm. Maffitt, Fuller's.
Lieut. Rufus Ingalls, rifles, Gadsby's.
Lieut. Geo. Stevens, rifles, Gadsby's.

20—Capt. M. M. Clark, A. Q. M., Fuller's.
Lieut. A. H. Dearborn, ordnance, Gadsby's.

24—Paymaster E. Van Ness, Gen. Van Ness's.
Ass't Surgeon J. Simpson, Fuller's.

25—Lt. Col. W. G. Belknap, 8th infy., Gadsby's.
Capt. G. S. Drane, 2d art'y, Gadsby's.
Major J. Erving, 3d art'y, Fuller's.
Capt. L. J. Beall, rifles, Georgetown.

26—Ass't Sur. D. C. Dedron, Fuller's.

27—Lieut. R. B. Judd, 3d art'y, Fuller's.

28—Ass't Sur. A. F. Suter, Mr. Suter's.